

Appl. No. 09/982,304
Amdt. Dated May 22, 2006
Reply to Office Action of January 20, 2006

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. Canceled.
2. (Currently Amended) A single plate type solid-state image pickup device having primary-color type color filters, characterized in that gray filters are arranged at specific pixels of the arrangement of the three primary color filters, said image pickup device further comprising means for applying carrier balance so that said gray filters have substantially the same frequency characteristic as the other three primary color filters ~~The single plate type solid-state image pickup device as claimed in claim 1,~~ wherein the color arrangement of said color filters is Bayer arrangement, and green filters that are adjacent to red filters in the horizontal direction or green filters that are adjacent to blue filters in the horizontal direction are replaced by said gray filters.
3. (Cancelled)
4. (Currently Amended) A single plate type solid-state image pickup device having primary-color type color filters, characterized in that gray filters are arranged at specific pixels of the arrangement of the three primary color filters, said image pickup device further comprising means for applying carrier balance so that said gray filters have substantially the same frequency characteristic as the other three primary color filters ~~The single plate type solid-state image pickup device as claimed in claim 1,~~ further comprising white balance

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correction means for correcting the white balance of the signal output from the carrier balance means.

5. (Previously Presented) The single plate type solid-state image pickup device as claimed in claim 4, further comprising interpolation means for interpolating the signal output from the white balance correction means in order to generate three separate primary color image signals.

6. (Previously Presented) The single plate type solid-state image pickup device as claimed in claim 5, further comprising aperture control means for generating an aperture control signal for application to each of the three primary color image signals output from the interpolation means.

7. (Previously Presented) The single plate type solid-state image pickup device as claimed in claim 6, further comprising gamma correction means for correcting the gamma characteristic of each of the three primary color image signals after application of the aperture control signal.

8. (Currently Amended) A single plate type solid-state image pickup device having primary-color type color filters, characterized in that gray filters are arranged at specific pixels of the arrangement of the three primary color filters, said image pickup device further comprising means for applying carrier balance so that said gray filters have substantially the

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same frequency characteristic as the other three primary color filters ~~The single plate~~
~~type solid-state image pickup device as claimed in claim 1,~~ wherein the color arrangement of
said color filters is g-stripe arrangement, and every other green filter in each column of g-
stripe arranged green filters are replaced by said gray filters.

9. (Previously Presented) A single plate type solid-state image pickup device
having red, green, blue, and gray color filters, characterized in that the gray filters are
arranged at specific pixels of the arrangement of the three primary color filters, and wherein
the transmissivity of the gray filter is set so that the integration value in the visible region is
substantially equal to that of the green filters.

10. (Previously Presented) A single plate type solid-state image pickup device
having red, green, blue, and gray color filters, characterized in that the gray filters are
arranged at specific pixels of the arrangement of the three primary color filters, and wherein
the transmissivity of the gray filter is set so that the integration value in the visible region is
below that of the green filters.